

A Survey of the Attitudes of Dentists Toward Expanding Auxiliaries' Duties

ROY L. LINDAHL, DDS, MS, CHESTER W. DOUGLASS, DDS, PhD, MPH,
and SANDRA HUFF, BS

Dr. Lindahl is director, dental demonstration practice, Dr. Douglass is head, division of community health and behavioral sciences, and Ms. Huff was formerly a research assistant, Health Services Research Center, School of Dentistry, University of North Carolina, Chapel Hill. The research was supported by the Health Services Research Center, University of North Carolina, through grant No. HS00239 from the National Center for Health Services Research and Development, Health Services and Mental Health Administration. Tearsheet requests to Dr. C. W. Douglass, University of North Carolina, School of Dentistry, Chapel Hill, N.C. 27514.

IN MAY 1969 the Council on Dental Education for the American Dental Association established an interagency committee to consider expanding the functions of dental hygienists and dental assistants. This specially formed committee included representatives of the American Dental Association, the American Association of Dental Examiners, the American Association of Dental Schools, the American Dental Hygienists' Association, and the American Dental Assistants' Association (1).

In April 1970 the interagency committee made its report to the Council on Dental Education. The committee agreed that the dental profession was ready to delegate to auxiliaries more functions than presently permitted by law (2). The committee also agreed that the value of auxiliaries performing expanded functions had not been tested adequately in a controlled private-practice environment and suggested that such experiments be made. The committee also recommended that the Council on Dental Education request the House of Delegates of the American Dental Association to rescind the existing policy statement governing experimentation concerning expanded functions of dental auxiliaries and approve a policy statement that is more permissive.

In August 1971 several schools of dentistry

initiated programs for training expanded-duty dental assistants and teaching expanded auxiliary management to dental students. These programs are Training in Expanded Auxiliary Management (TEAM programs) funded by the Division of Dental Health, National Institutes of Health (3, 4). Thus, from these and many other activities of the past 3 years, duties for dental auxiliaries are being expanded. An important component of this innovative process is the willingness of dentists in private practice to allow their dental assistants to extend their functions.

The purpose of the research reported here was to determine the current attitudes of practicing dentists toward expanding the duties of dental auxiliaries.

Methods

A survey of practicing dentists in North Carolina was conducted by the University of North Carolina Health Services Research Center. A questionnaire was constructed to obtain the attitudes of dentists in private practice toward using expanded-duty assistants (EDAs) in their offices. It was initially mailed to a pretest group of 100 dentists who were selected randomly. Questions with low response rates or which were answered incoherently were removed from the final questionnaire. Of these 100 questionnaires, 50 were comprehensive and 50 were a shortened version. Because the same number of each version of the questionnaire was received, the comprehensive form was used for the final study. The final questionnaire was mailed to 1,600 dentists in December 1970. Slightly more than 25 percent responded, and, after eliminating those questionnaires that were either illegible or incomplete, the final study was based on an analysis of 360 completed questionnaires.

Although we did not analyze data about dentists who did not respond, several characteristics of the 25 percent who did respond suggested that they were representative of the dentists practicing

in North Carolina. First, the distribution of general practitioners and specialists in this group was similar to the overall State distribution. Second, the data on the year of graduation showed that the responding dentists represented all age groups. Third, the responding dentists employed nearly every possible type of auxiliary, combination of types of auxiliaries, and number of chairs. That is, responses ranged from dentists who used one chair and practiced by themselves to dentists who used as many as seven, eight, or nine chairs and employed a variety of auxiliaries. Finally, a survey of practicing dentists by the North Carolina State Board of Dental Examiners (5), released October 4, 1971, showed data that generally coincided with the findings reported here.

Findings

The TEAM project requires dental schools to include approximately 11 or 12 specific duties (depending on how they are combined) in their training programs (4). Our report deals primarily with the attitudes of dentists in North Carolina toward delegating 12 duties to existing dental assistants. The percentages of respondents willing to delegate each of these 12 duties are shown in table 1. More than 75 percent of the dentists would delegate 7 of these 12 functions to an expanded-duty assistant. These functions (Nos. 1-7, table 1) are taking alginate impressions for study casts, applying rubber dams, instructing the patient in oral health, applying topical fluoride, finishing amalgam restorations, finishing resin and silicate restorations, and rubber-cup prophylaxis.

Table 1. Percent of respondents willing to delegate expanded duties to a dental auxiliary, by duty

Duties ¹	Respondents in favor of delegation (percent)
1. Take study model impressions	89
2. Apply rubber dam	77
3. Explain cause of dental decay, teach preventive dentistry, and give oral hygiene instruction	93
4. Apply fluoride	99
5. Polish amalgam restorations	92
6. Polish resin and silicate restorations	84
7. Polish teeth (rubber-cup prophylaxis)	98
8. Chart mouth	58
9. Place and remove temporary restorations	69
10. Place matrix and wedge	60
11. Condense and carve amalgam	48
12. Place resins and silicates	38
Prepare cavity ²	7
Scale teeth ³	95

¹ TEAM duties are numbered from duties most likely to be delegated to duties least likely to be delegated.

² Procedure most dentists want to perform themselves.

³ Procedure most dentists want the hygienist to perform.

Between 50 and 75 percent of the respondents would allow three additional duties to be delegated. These duties (Nos. 8-10, table 1) are preliminary oral examinations or charting, placing and removing temporary restorations, and placing the matrix. It seems then that most of the dentists responding to this questionnaire already believed that 10 of the 12 duties included in the TEAM project could be delegated to dental assistants.

The majority of responding dentists did not, however, believe that an assistant should condense amalgam or place silicate and resin restora-

Table 2. Percent of responses, by duty and most appropriate operator

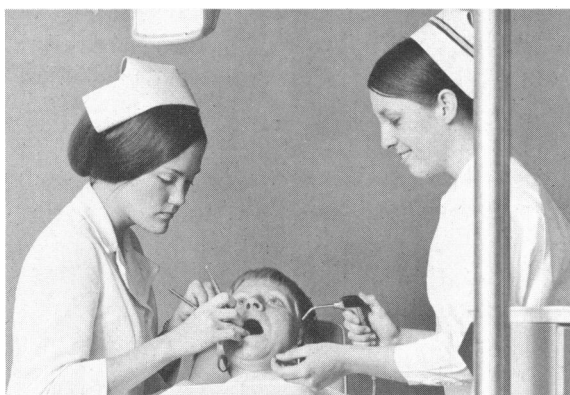
Procedure	Expanded duty assistant	Dentist	Certified dental assistant	Dental hygienist	Percent difference
Place temporary fillings.	40.1	31.0			+ 9.1
Polish restorations.	33.0		28.0		+ 5.0
Take alginate impression.	30.5		28.6		+ 1.9
Place and remove matrix.	32.6	40.3			- 7.7
Insert rubber dam.	28.1		40.6		-12.5
Carve amalgam.	32.4	49.6			-17.5
Condense amalgam.	28.6	52.8			-24.2
Teach preventive dentistry.	15.4		37.9		-22.5
Chart mouth.	14.3	41.9			-27.6
Apply fluoride.	12.7		49.9		-37.2
Polish teeth (pumice prophylaxis).	16.7			51.4	-37.4
Place resins and silicates.	23.3	62.3			-39.0
Scale teeth ¹	6.6			78.0	-71.4
Prepare cavity for amalgam ¹		93.1			-93.1

¹ Procedure that most dentists would not delegate to the EDA.

tions. Only 25 to 50 percent of the respondents would delegate condensing amalgam and placing resins or silicates. These findings are similar to the results of two other statewide surveys—one by the North Carolina State Board of Dental Examiners (5) and the other by Waller (6) of the Georgia Department of Public Health. In all three surveys, approximately one-third of the dentists who responded believed that dental assistants could and should place restorations. The findings of these three studies were compared and analyzed by Douglass and Stacey (7).

The persons on the dental team who the respondents believed should perform the duties listed are shown in table 2. The percentage of dentists who believe that the EDA should perform the duty mentioned is shown in the first column. The next three columns show the percentage of dentists who believe that the dentist, the existing dental assistant, or the hygienist should perform the particular duty. The final column shows how far ahead or behind the EDA is in being delegated the duty. If we assume that the CDA (certified dental assistant) will become the EDA, the findings suggest that the EDA will be competing for six duties with the dentist (although she is already the most popular choice for placing temporary fillings), and at the same time she will be competing with the dental hygienist for a seventh duty (polishing teeth). Scaling teeth and cavity preparation are added to table 2 to illustrate duties that practicing dentists almost unanimously favor not changing from their present assignment.

On the positive side, dentists agree that an EDA will increase productivity, free the dentist for more skilled jobs, and help more patients. On



the negative side, a minority of dentists believe that the EDA will increase paperwork, decrease quality of care, slow operations, alienate patients, and make the office dependent on her. These respondents, however, gave no explanation as to why they held these beliefs (table 3).

In several important areas, the dentists' expectations showed larger margins of disagreement. Among these were the questions of (a) whether the quality of work would increase and (b) the effect of an EDA on the net income of the practice. The results of the present experiments on using auxiliaries to perform expanded duties formerly only done by the dentist will help to clarify areas of widely diverging opinions.

Discussion

Because of various personal characteristics, apparently not all dentists will be able to accept the innovation of working as a team with new health professionals (unlike, for instance, the innovation of working with high-speed equipment). To analyze these tendencies, a correlational analysis on responses was made to determine the background characteristics and attitudes that are associated with the tendency to accept the EDA as a team member.

The Pearson product-moment correlation coefficient was used to analyze the relationships among several of the background and attitudinal variables in the questionnaire. All variables that were studied correlated with a probability of chance occurrence of between 0.01 and 0.05.

Dentists who are not willing to delegate duties to the EDA tend to be older, have been in practice longer, see fewer patients per day, employ fewer auxiliaries and at lower salaries, believe the EDA will have a negative effect, feel that their present facilities are not appropriate for the use of an EDA. In contrast, dentists who would

Table 3. The attitudes of dentists concerning the positive or negative effects of employing an EDA

Responses	Percent
The EDA will—	
Increase productivity	85.7
Free you for more skilled jobs	84.9
Help more patients	78.5
Increase paperwork	10.6
Decrease quality of your work	3.2
Slow down your operations	1.9
Alienate patients	1.6
Make office dependent on her	11.1
The EDA will not—	
Increase your free time	37.9
Increase quality of your work	39.0
Increase your net income	53.1
Give you a more professional associate	34.0

delegate additional duties to an EDA tend to be younger, have newer practices, employ more auxiliaries at higher salaries, believe the EDA will have a positive effect, and feel that their present facilities with minor changes could be adapted to allow an EDA to assist them. It seems then that a dentist in active practice who likes to work with a group of people is more likely to be amenable to the idea of employing an EDA.

The results of the study show that a large proportion of the survey respondents are willing to delegate many duties to auxiliaries that have been traditionally performed by dentists. Certain areas of disagreement and uncertainty in the survey results demonstrate the need for experimental research on the use of auxiliaries in the performance of expanded functions. Determinations must be made concerning the practical and realistic use of expanded-function auxiliaries in the dental office of the private practitioners. Such experimentation is presently being conducted at a few universities throughout the United States. Several dental schools also have programs to train dental auxiliaries to perform extended functions. Such experiments and innovative educational programs

are greatly needed if the process of expanding the duties of dental auxiliaries is to be orderly and rational.

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In May 1969 the Council on Dental Education of the American Dental Association established an interagency committee to consider and encourage expansion of the functions of dental auxiliaries, experimentation in controlled environments, and revision of legislation to permit broader roles for dental auxiliaries. These roles are now being broadened.

To determine the attitudes of dentists toward expanding the roles of auxiliaries, a survey was made in North Carolina from which a nearly 25 percent response was received. An analysis of responses show that they are representative of the dentist population in the State.

The findings of the survey

show also that most of the respondents believe that 10 of the 12 functions included in the TEAM (Training Expanded Auxiliary Management) project can be delegated to a dental assistant. These 10 functions are: taking alginate impressions for study casts, applying rubber dams, instructing in oral health, applying topical fluoride, finishing amalgam restorations, finishing resin and silicate restorations, rubber-cup prophylaxis, making preliminary oral examinations, placing and removing temporary restorations, and placing the matrix. Most of the dentists did not believe that an assistant should condense amalgam or place silicate and resin restorations and would not delegate scal-

ing procedures to anyone except the dental hygienist. They would also not delegate cavity preparation to anyone other than a dentist.

Dentists who were not willing to delegate duties to the EDA tended to be older, had been in practice longer, saw fewer patients per day, employed fewer auxiliaries and at lower salaries, believed the EDA would have a negative effect, and felt that their present facilities were not appropriate.

Results of the survey indicated areas of disagreement and uncertainty and demonstrated the need for experimental research on the use of auxiliaries in the performance of expanded functions in the private dental office.